

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Canceled)

2. (Previously Presented) The homogenizer of Claim 5, wherein the rotatable element can be driven in the same direction as or opposite to the rotor.

3-4. (Canceled)

5. (Currently Amended) A homogenizer for homogenizing a free-flowing substances substance, comprising:

a rotor which is mounted for rotation in a first housing,

a drive device coupled to rotate the rotor,

a rotatable element coupled to the drive device and mounted for rotation in the first housing, the rotatable element driven for rotation independently of the rotor for homogenizing and/or transporting the free-flowing substance, and the rotatable element being constructed as an impeller with a plurality of pump buckets, and

two coaxial drive shafts coupled with the rotatable element and the rotor to drive the rotatable element or the rotor, wherein the rotatable element and the rotor are

arranged relative to each other such that a shearing force is applied to the free-flowing substance passing between the rotatable element and the rotor, a magnitude of the shearing force being dependent upon the relative speed of the rotatable element and the rotor.

6. (Original) The homogenizer of Claim 5, wherein at least one of the two drive shafts is constructed as a hollow shaft.

7-8. (Cancelled)

9. (Previously Presented) The homogenizer of Claim 5, wherein at least one of the rotor and the rotatable element has a base plate which is coupled with the corresponding drive shaft, the rotational axes of the drive shafts are positioned essentially vertically in operation, and the drive shafts are each driven by one of a toothed belt V-belt and chain.

10. (Currently Amended) A homogenizer for homogenizing a free-flowing substances substance, comprising:

a rotor which is mounted for rotation in a ~~first~~ housing,

a drive device coupled to rotate the rotor,

a rotatable element coupled to the drive device and mounted for rotation in the ~~first~~ housing, the rotatable element driven for rotation independently of the rotor for

homogenizing and/or transporting the free-flowing substance, and the rotatable element being constructed as an impeller with a plurality of pump buckets, and

respective drive motors coupled to the rotor and the rotatable element, the drive motors being controlled such that the rotor and the rotatable element can be rotated at adjustable relative speeds in the same or opposite directions, or such that either the rotor or the rotatable element is driven while the other component stands still, wherein the rotatable element and the rotor are arranged relative to each other such that a shearing force is applied to the free-flowing substance passing between the rotatable element and the rotor, a magnitude of the shearing force being dependent upon the relative speed of the rotatable element and the rotor.

11. (Original) The homogenizer of Claim 10, wherein the drive motors of the rotor and the rotatable element can be controlled in such a way that the rotor and the rotatable element can each rotate in both directions.

12-13. (Cancelled)

14. (Original) The homogenizer of Claim 5 further comprising:

respective drive motors operable to rotate the respective drive shafts.

15. (Currently Amended) The homogenizer of Claim [[8]] 26, wherein the shaft seal is a sliding ring seal.

16. (Currently Amended) A homogenizer for homogenizing a free-flowing substances
substance, comprising:

a housing;

a rotor mounted for rotation in the housing and having a plurality of rotor
blades disposed thereon;

a drive device coupled to rotate the rotor;

a rotatable element coupled to the drive device and mounted for rotation in
the housing, the rotatable element comprising a plurality of pump buckets and driven for
rotation independent of the rotor to thereby homogenize and/or transport the free-
flowing substance; and

a plurality of stator blades disposed within the housing, at least some of
the stator blades positioned between the rotor blades and the pump buckets.

17. (Previously Presented) The homogenizer of claim 16, wherein the plurality of stator
blades are mounted to the housing.

18. (Previously Presented) The homogenizer of claim 16, wherein the plurality of stator
blades are mounted for rotation with the rotatable element.

19. (Previously Presented) The homogenizer of claim 16, wherein the plurality of pump
buckets include inner pump buckets and outer pump buckets, the inner pump buckets

positioned radially inward of the outer pump buckets, and wherein the stator blades are disposed between the inner and outer pump buckets.

20. (Previously Presented) The homogenizer of Claim 10, wherein the rotatable element can be driven in the same direction as or opposite to the rotor.

21. (Cancelled)

22. (Currently Amended) The homogenizer of Claim ~~[[21]]~~ 29, wherein the shaft seal is a sliding ring seal.

23-24. (Cancelled)

25. (NEW) A homogenizer for homogenizing a free-flowing substance, comprising:

- a first housing,
- a rotor which is mounted for rotation in the first housing,
- a drive device coupled to rotate the rotor,
- a rotatable element coupled to the drive device and mounted for rotation in the first housing, the rotatable element driven for rotation independently of the rotor for homogenizing and/or transporting the free-flowing substance, and the rotatable element being constructed as an impeller with a plurality of pump buckets,
- an outer drive shaft supported in a second housing, and

an inner drive shaft coaxially supported in the outer drive shaft by roller bearings, at least one of the inner drive shaft and the outer drive shaft being constructed as a hollow shaft, wherein the inner drive shaft and the outer drive shaft are coupled with the rotatable element and the rotor to drive the rotatable element or the rotor.

26. (NEW) A homogenizer for homogenizing a free-flowing substance, comprising:

a housing,

a rotor which is mounted for rotation in the housing,

a drive device coupled to rotate the rotor,

a rotatable element coupled to the drive device and mounted for rotation in the housing, the rotatable element driven for rotation independently of the rotor for homogenizing and/or transporting the free-flowing substance, and the rotatable element being constructed as an impeller with a plurality of pump buckets,

two coaxial drive shafts coupled with the rotatable element and the rotor to drive the rotatable element or the rotor, and

at least one shaft seal for sealing the interior of the housing against the surroundings.

27. (NEW) A homogenizer for homogenizing a free-flowing substance, comprising:

a housing having a control valve, an inlet opening through which the free-flowing substance can flow axially from a container into the interior of the housing, and a return line communicating with the housing and through which the liquid substance can

be conveyed back to various locations in the container depending on the position of the control valve,

a rotor which is mounted for rotation in the housing,

a drive device coupled to rotate the rotor,

a rotatable element coupled to the drive device and mounted for rotation in the housing, the rotatable element driven for rotation independently of the rotor for homogenizing and/or transporting the free-flowing substance, and the rotatable element being constructed as an impeller with a plurality of pump buckets, and

two coaxial drive shafts coupled with the rotatable element and the rotor to drive the rotatable element or the rotor.

28. (NEW) A homogenizer for homogenizing a free-flowing substance, comprising:

a housing,

a rotor which is mounted for rotation in the housing,

a drive device coupled to rotate the rotor,

a rotatable element coupled to the drive device and mounted for rotation in the housing, the rotatable element driven for rotation independently of the rotor for homogenizing and/or transporting the free-flowing substance, and the rotatable element being constructed as an impeller with a plurality of pump buckets,

two coaxial drive shafts coupled with the rotatable element and the rotor to drive the rotatable element or the rotor, and

fixed-position stator interleavings arranged on the housing.

29. (NEW) A homogenizer for homogenizing a free-flowing substance, comprising:

a housing;

a rotor which is mounted for rotation in the housing,

a drive device coupled to rotate the rotor,

a rotatable element coupled to the drive device and mounted for rotation in the housing, the rotatable element driven for rotation independently of the rotor for homogenizing and/or transporting the free-flowing substance, and the rotatable element being constructed as an impeller with a plurality of pump buckets,

respective drive motors coupled to the rotor and the rotatable element, the drive motors being controlled such that the rotor and the rotatable element can be rotated at adjustable relative speeds in the same or opposite directions, or such that either the rotor or the rotatable element is driven while the other component stands still, and

at least one shaft seal is provided to seal the interior of the housing against the surroundings.

30. (NEW) A homogenizer for homogenizing a free-flowing substance, comprising:

a housing having a control valve, an inlet opening through which the free-flowing substance can flow axially from a container into the interior of the housing, and a return line communicating with the housing and through which the liquid substance can be conveyed back to various locations in the container depending on the position of the control valve,

a rotor which is mounted for rotation in the housing,
a drive device coupled to rotate the rotor,
a rotatable element coupled to the drive device and mounted for rotation in the housing, the rotatable element driven for rotation independently of the rotor for homogenizing and/or transporting the free-flowing substance, and the rotatable element being constructed as an impeller with a plurality of pump buckets, and
respective drive motors coupled to the rotor and the rotatable element, the drive motors being controlled such that the rotor and the rotatable element can be rotated at adjustable relative speeds in the same or opposite directions, or such that either the rotor or the rotatable element is driven while the other component stands still.

31. (NEW) A homogenizer for homogenizing free-flowing substances comprising:
a housing,
a rotor which is mounted for rotation in the housing,
a drive device coupled to rotate the rotor,
a rotatable element coupled to the drive device and mounted for rotation in the housing, the rotatable element driven for rotation independently of the rotor for homogenizing and/or transporting the free-flowing substance, and the rotatable element being constructed as an impeller with a plurality of pump buckets,
respective drive motors coupled to the rotor and the rotatable element, the drive motors being controlled such that the rotor and the rotatable element can be rotated at adjustable relative speeds in the same or opposite directions, or such that

either the rotor or the rotatable element is driven while the other component stands still,
and

fixed-position stator interleavings arranged on the housing.

32. (NEW) A homogenizer for homogenizing a free-flowing substance, comprising:

a rotor which is mounted for rotation in a housing,

a drive device coupled to rotate the rotor,

a rotatable element coupled to the drive device and mounted for rotation in the housing, the rotatable element driven for rotation independently of the rotor for homogenizing and/or transporting the free-flowing substance, and

respective drive motors coupled to the rotor and the rotatable element, the drive motors being controlled such that the rotor and the rotatable element can be rotated at adjustable relative speeds in the same or opposite directions, or such that either the rotor or the rotatable element is driven while the other component stands still, wherein the rotatable element and the rotor are arranged relative to each other such that a shearing force is applied to the free-flowing substance passing between the rotatable element and the rotor, a magnitude of the shearing force being dependent upon the relative speed of the rotatable element and the rotor.